Fig 1

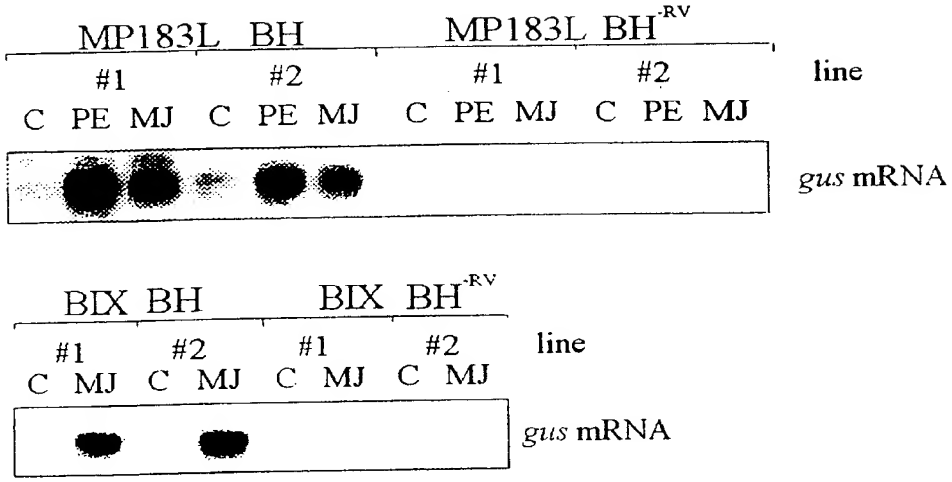


Fig 2

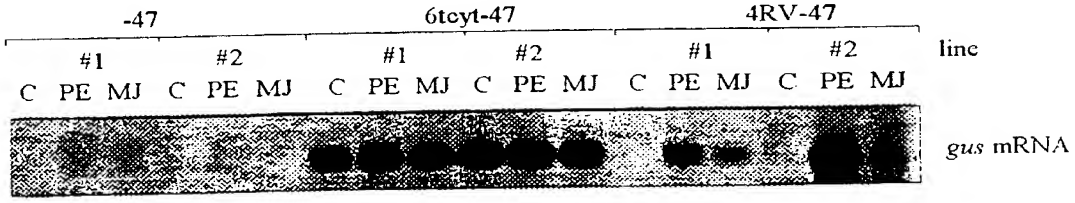


Fig 3

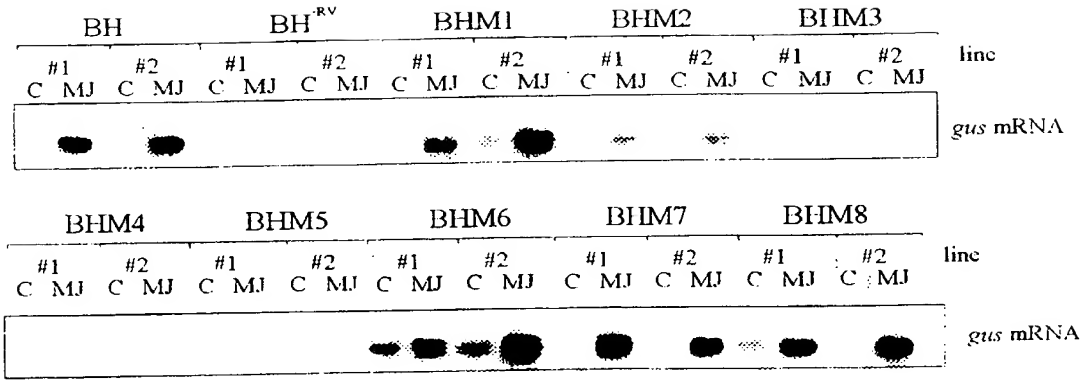


Fig 5a

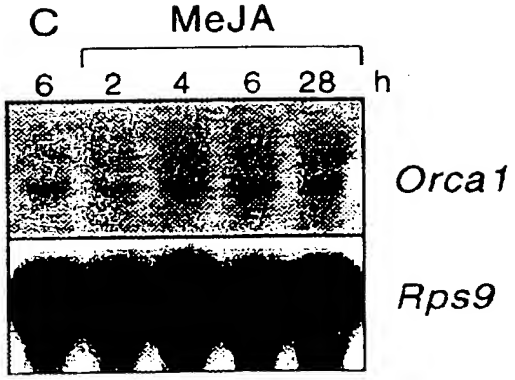


Fig 5b

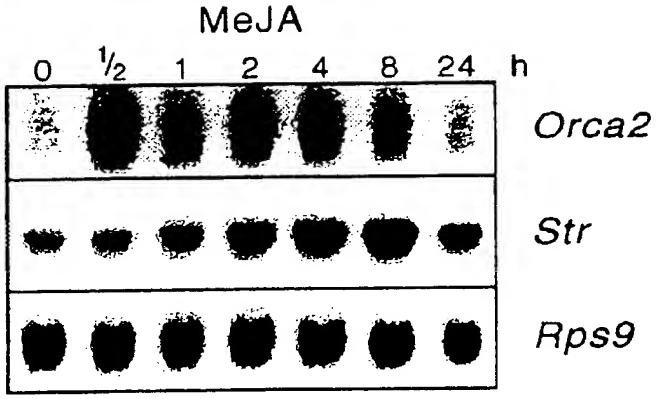
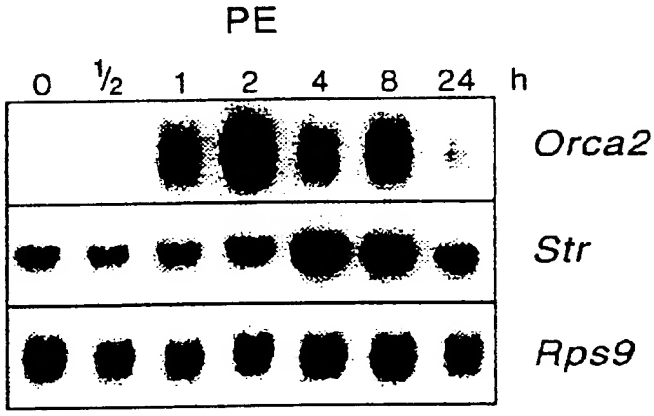


Fig 5c



SUBSTITUTE SHEET (RULE 26)

Fig 4

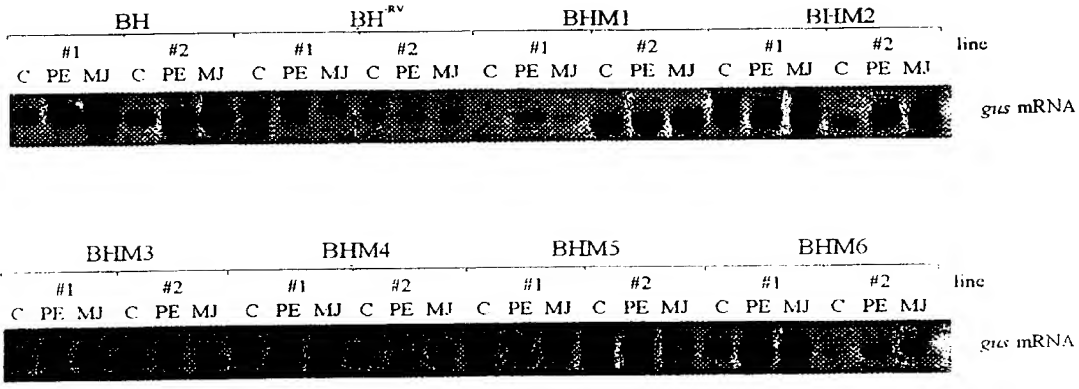


Fig 6

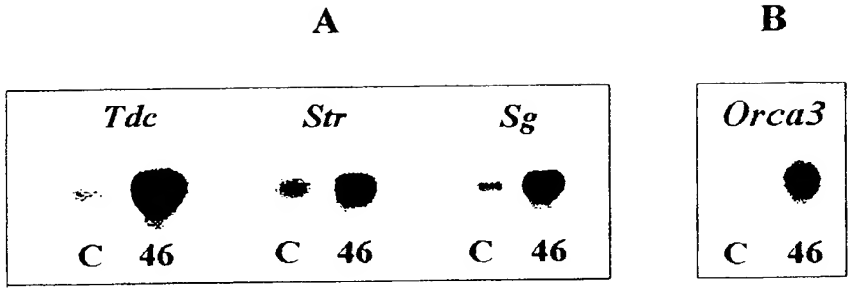


Fig 7

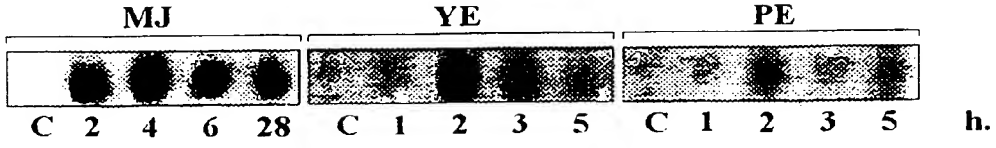
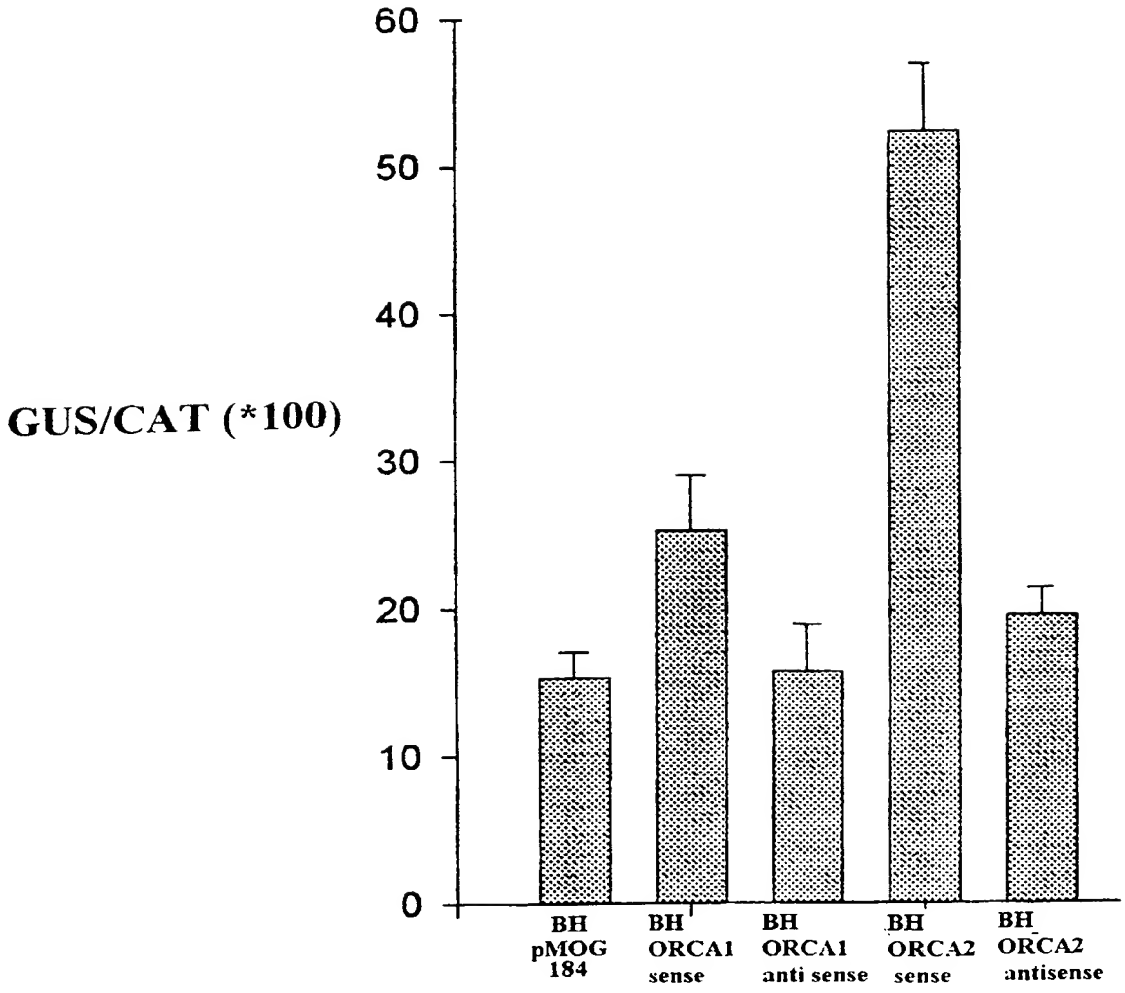


Fig 8


GUS/CAT (*100)
60
50
40
30
20
10
0
BH pMOG 184
BH ORCA1 sense
BH ORCA1 anti sense
BH ORCA2 sense
BH ORCA2 antisense

SUBSTITUTE SHEET (RULE 26)

Fig 9 TRANSIENT ACTIVATION OF BH-GUSSH AND MUTANTS BY ORCA1 AND ORCA2

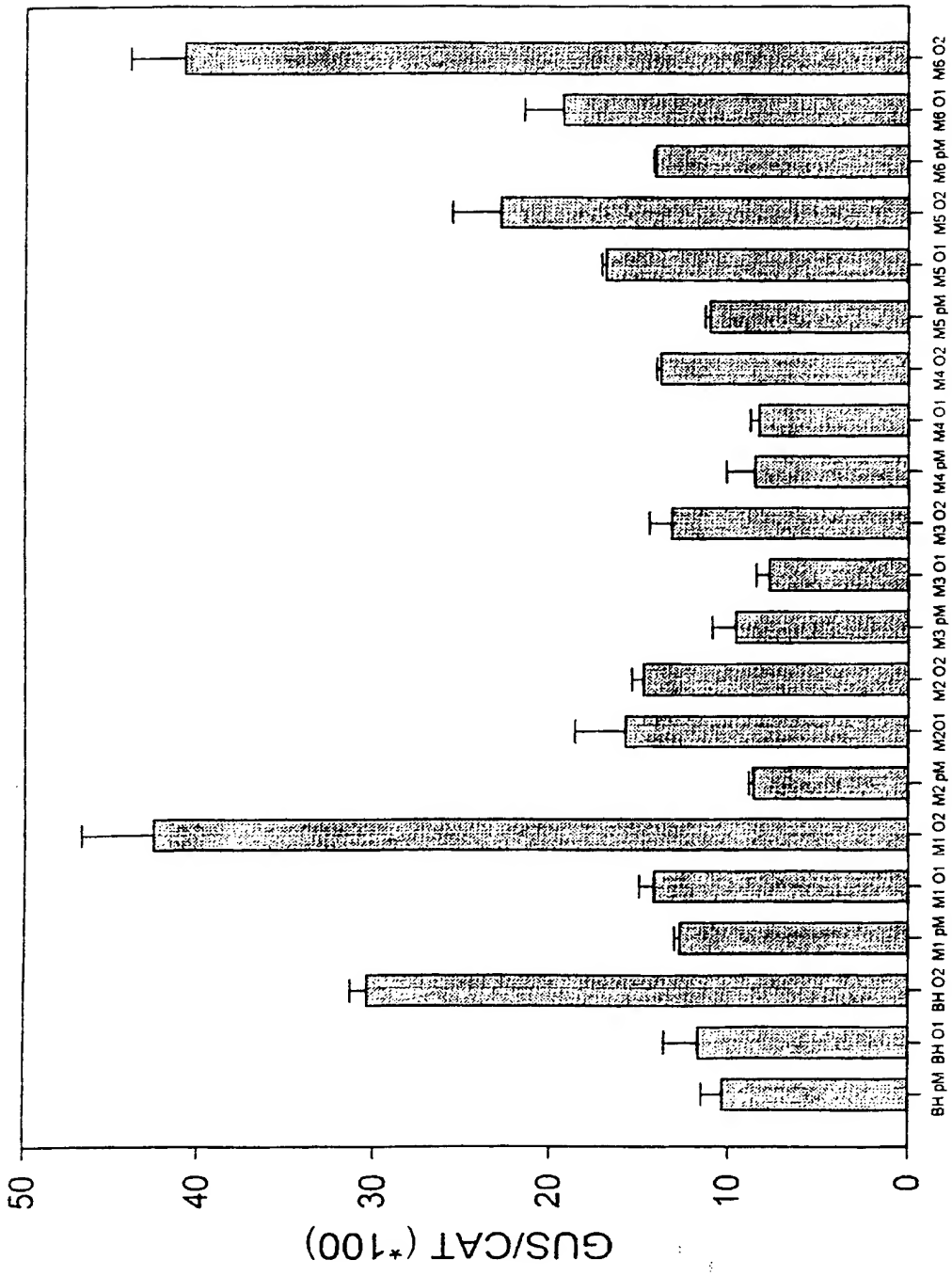
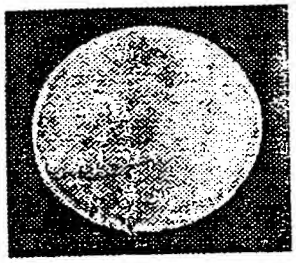


Fig 10

Str - promoter - *gusA*

co-bombarded with

empty vector



35S - *Orca3*

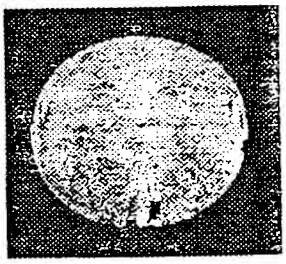
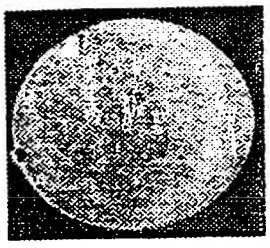


Fig 11

Tdc - promoter - *gusA*

co-bombarded with

empty vector



35S - *Orca3*

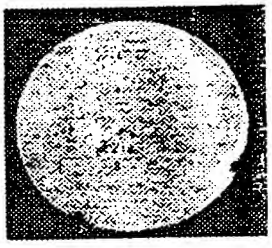


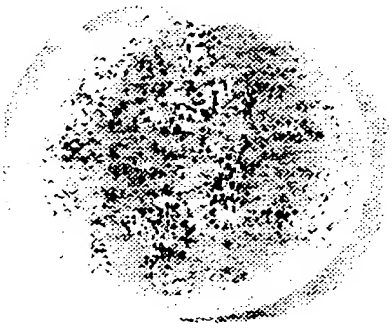
Fig 12

4RV - *gusA*
co-bombarded with

empty vector

35S - *Orca1*

35S - *Orca2*



35S - *Orca3*

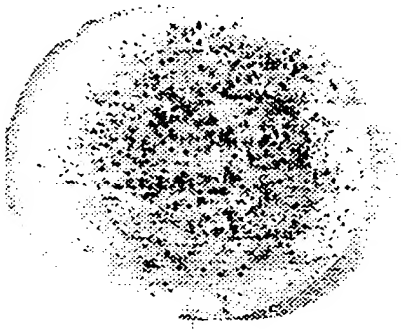


Fig 13a

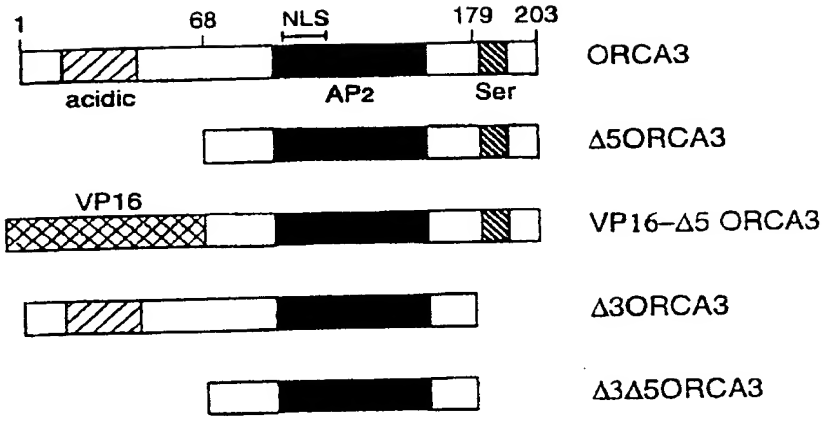


Fig 13b

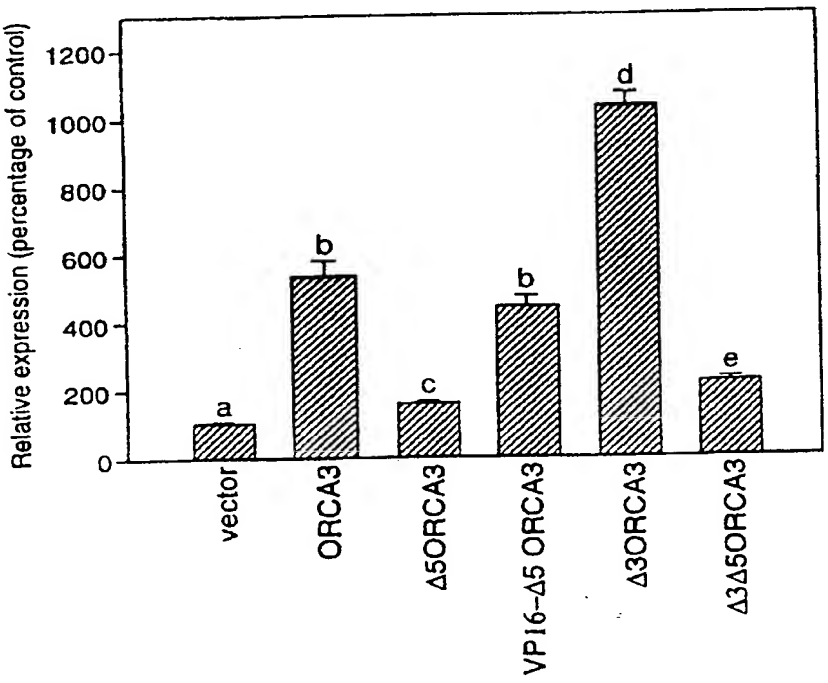


Fig 14a Fig 14b Fig 14c

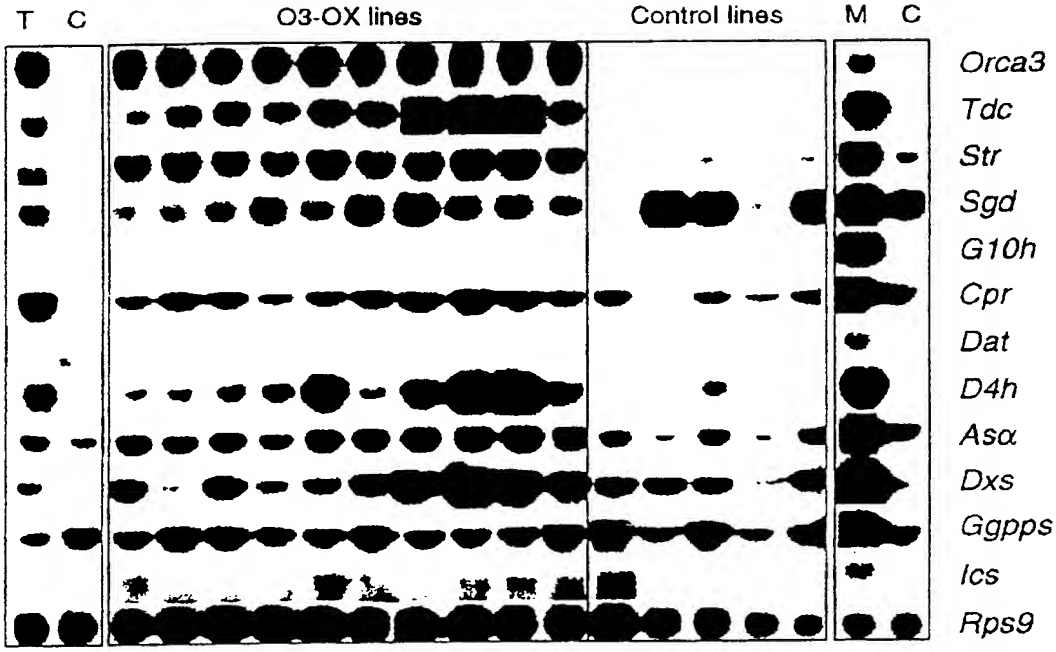


Fig 14d

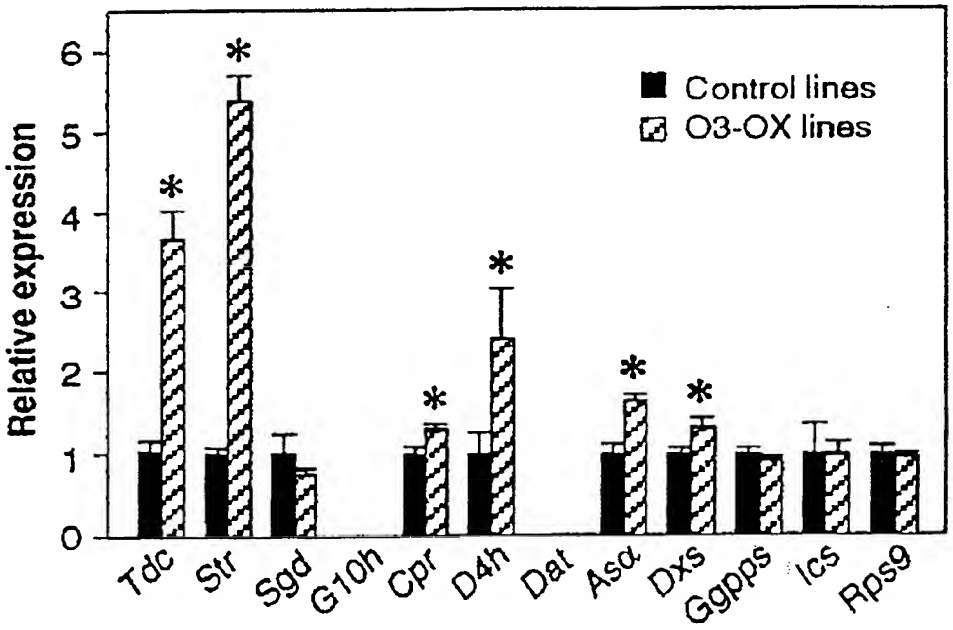


Fig 15

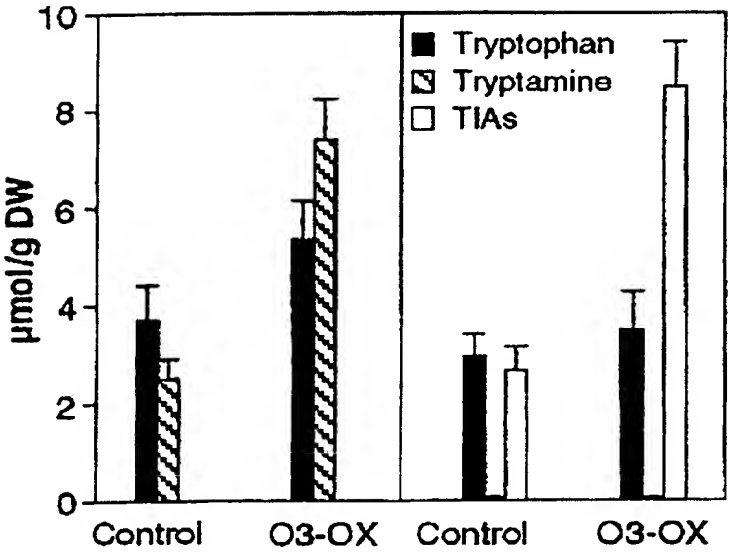

10
8
6
4
2
0
µmol/g DW
Tryptophan
Tryptamine
TIAs
Control
O3-OX
Control
O3-OX

Fig 16a

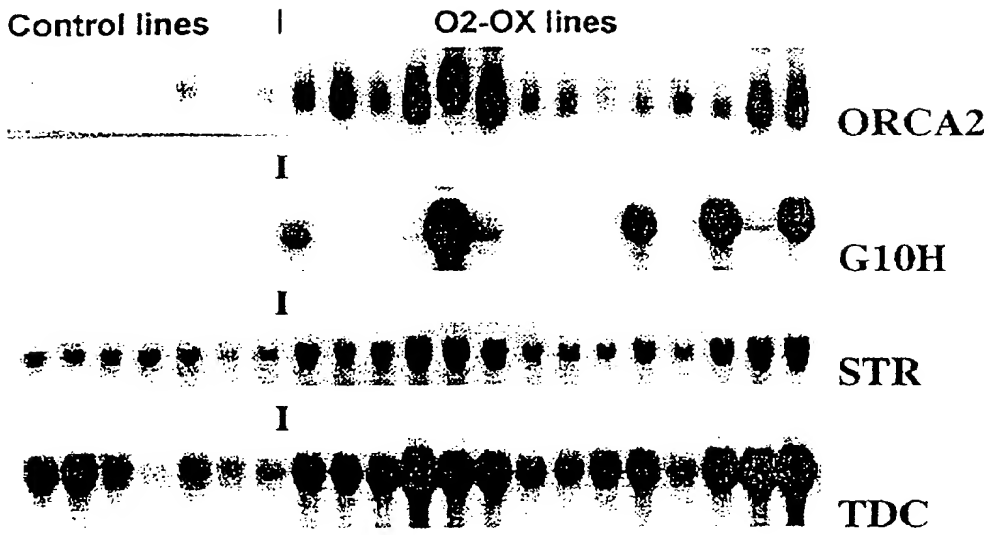


Fig 16b

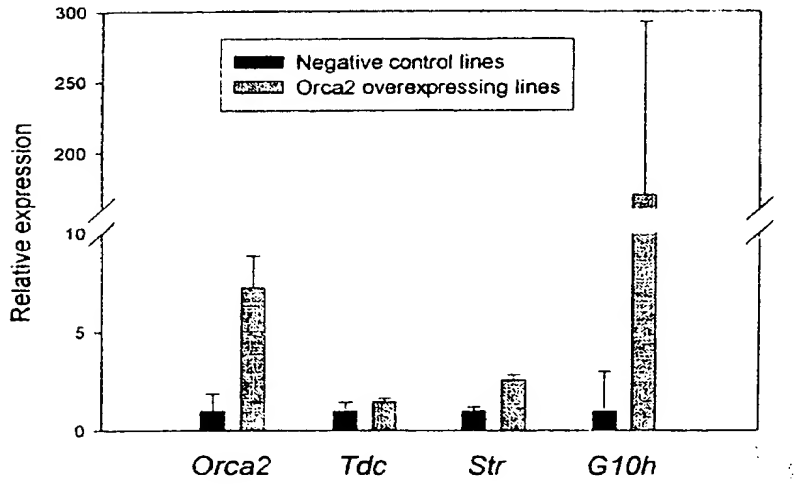
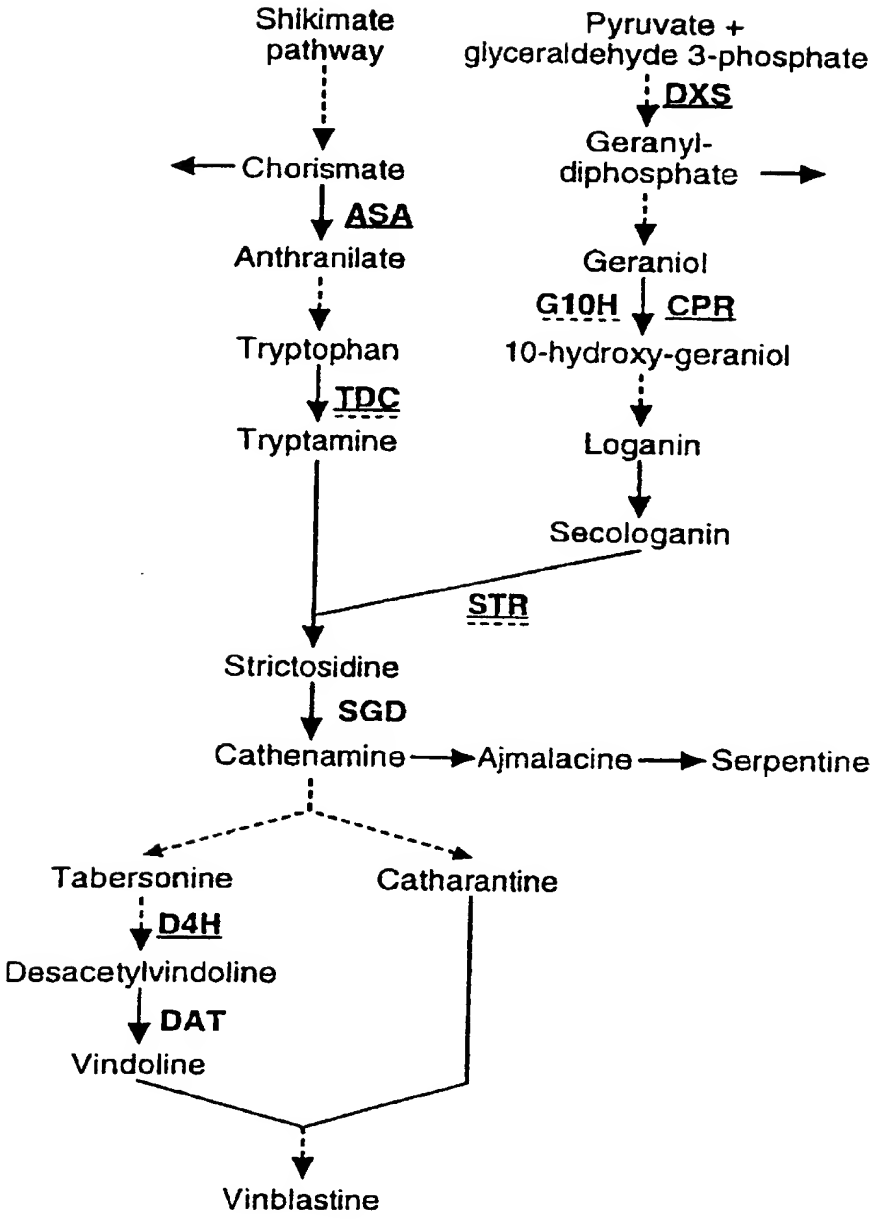


Fig 17


Shikimate pathway
Pyruvate + glyceraldehyde 3-phosphate
DXS
Chorismate
Geranyl-diphosphate
ASA
Anthranilate
Geraniol
G10H
CPR
Tryptophan
10-hydroxy-geraniol
TDC
Tryptamine
Loganin
Secologanin
STR
Strictosidine
SGD
Cathenamine
Ajmalacine
Serpentine
Tabersonine
Catharantine
D4H
Desacetylvindoline
DAT
Vindoline
Vinblastine